Complete Summary

GUIDELINE TITLE

Coronary artery disease (CAD) clinical practice guidelines.

BIBLIOGRAPHIC SOURCE(S)

Kaiser Permanente Care Management Institute. Coronary artery disease (CAD) clinical practice guidelines. Oakland (CA): Kaiser Permanente Care Management Institute; 2008 May. 194 p. [137 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Kaiser Permanente Care Management Institute. Secondary prevention of coronary artery disease clinical practice guideline. Oakland (CA): Kaiser Permanente Care Management Institute; 2006 Mar. 117 p. [51 references]

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

 November 17, 2009 - Plavix (clopidogrel): The U.S. Food and Drug Administration (FDA) notified healthcare professionals of new safety information concerning an interaction between clopidogrel (Plavix) and omeprazole (Prilosec/Prilosec OTC) used to reduce stomach acid. New data show that when clopidogrel and omeprazole are taken together, the effectiveness of clopidogrel is reduced.

COMPLETE SUMMARY CONTENT

** REGULATORY ALERT **

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
CONTRAINDICATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Coronary artery disease (CAD)

GUIDELINE CATEGORY

Management Prevention Treatment

CLINICAL SPECIALTY

Cardiology Endocrinology Family Practice Internal Medicine Preventive Medicine

INTENDED USERS

Advanced Practice Nurses Managed Care Organizations Nurses Pharmacists Physician Assistants Physicians

GUIDELINE OBJECTIVE(S)

To assist primary care physicians and other health care professionals in the treatment of patients with coronary artery disease in order to prevent subsequent cardiovascular (CV) events

TARGET POPULATION

Adult patients with coronary artery disease

INTERVENTIONS AND PRACTICES CONSIDERED

- 1. Treatment of depression to improve mental health outcomes
- 2. Angiotensin-converting enzyme (ACE) inhibitor therapy
- 3. Angiotensin II receptor blocker (ARB) therapy
- 4. Anticoagulant Therapy

- 5. Antiplatelet therapy
 - Aspirin Clopidogrel
- 6. Antiplatelet therapy post stent placement
 - Clopidogrel plus aspirin
 - Delay of elective procedures requiring interruption of therapy
- 7. Beta-blocker therapy
 - Atenolol
 - Betaxolol
 - Bisoprolol
 - Carvedilol
 - Labetalol
 - Nadolol
 - Metoprolol
 - Propranolol
 - Timolol
 - Acebutolol
 - Pindolol
- 8. Calcium channel blocker therapy
- 9. Lifestyle modification
 - Diet therapy
 - Dietary fat modification
 - Smoking cessation
 - Exercise
- 10. Treating comorbid conditions
 - Hypertension (target blood pressure)
 - Lipid management (statin therapy)

Interventions considered but not recommended include (1) unopposed estrogen and estrogen and progestin combination therapy for the prevention of cardiovascular events in postmenopausal women; (2) screening for coronary artery disease by exercise stress testing, computed tomography angiography, and coronary artery calcium scoring in asymptomatic adults; and (3) dietary supplement therapy.

MAJOR OUTCOMES CONSIDERED

- Mortality due to cardiac causes
- All cause mortality
- Hospitalization, including non-fatal myocardial infarction (MI), nonfatal stroke, transient ischemic attack (TIA), unstable angina, and revascularization procedures
- Side effects of treatment

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources) Hand-searches of Published Literature (Secondary Sources) Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Guidelines are developed with the use of an "evidence-based methodology" and involve a systematic literature search, critical appraisal of the research design and statistical results of relevant studies, and grading of the sufficiency (quantity, quality, consistency, and relevancy) of the evidence for drawing conclusions.

During the guideline development process, the Guideline Development Team reviews evidence published in peer reviewed scientific journals, existing evidence-based guidelines, consensus-based statements from external professional societies and government health organizations, and clinical expert opinion of Kaiser Permanente regional specialty groups.

For details of the literature search, including databases searched and search terms for each clinical question, see the original guideline document.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Refer to Table 2 in the Appendix of the original guideline document for the system for grading the strength of a body of evidence.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The Guidelines Project Management Team performed systematic reviews of the medical literature on each of the clinical questions identified by the workgroup.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

To develop a guideline, the Kaiser Permanente Care Management Institute (CMI) consultants work with a multidisciplinary team of physicians and other health care professionals. This Guideline Development Team (GDT) consists of a core

multidisciplinary group of physicians representing the medical specialties most affected by the guideline topic, and other content experts from disciplines such as pharmacy, nursing, and social work, as appropriate. The members of the Guideline Development Team are endorsed by the National Guideline Directors from their region.

During the guideline development process, the Guideline Development Team reviews evidence published in peer-reviewed scientific journals, existing evidence-based guidelines, consensus-based statements from external professional societies and government health organizations, and clinical expert opinion of Kaiser Permanente regional specialty groups. The members of the Guideline Development Team develop the guideline and facilitate the information exchange in both directions on behalf of the region that they represent. This process should include obtaining the buy-in of the local champions regarding the guideline so that it will be implemented once published.

To keep current with changing medical practices, all guidelines are reviewed, and, if appropriate, revised at least every two years. To develop the Coronary Artery Disease Guideline, released in May 2008, a multidisciplinary, interregional GDT first met in November 2007 to define the scope of the guideline. The Project Management Team then performed systematic reviews of the medical literature on each of the clinical questions identified by the GDT, assembled the evidence, and developed draft recommendations for review by the GDT. All of the recommendations and supporting evidence were reviewed in depth by the GDT during two conference calls in January and March 2008.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Recommendations are classified as either "evidence-based (A-D, I)" or "consensus-based." Refer to the table below for full definitions.

Label and Language of Recommendations

| Recommendation Label | Recommendation Statement* | Evidence Base | | |
|--------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Evidence-Based Recommendations | | | | |
| Evidence-Based: A | The Guideline Development Team (GDT) strongly recommends the intervention. | The intervention improves important health outcomes, based on good evidence, and the GDT concludes that benefits substantially outweigh harms and costs. | | |
| Evidence-Based: B | The GDT recommends the intervention. | The intervention improves important health outcomes, based on 1) good evidence that benefits outweigh harms and costs; or 2) fair evidence that benefits substantially outweigh harms and costs. | | |
| Evidence-Based: C | The GDT makes no recommendation for or | Evidence is sufficient to determine the benefits, harms, and costs of an | | |

| Recommendation Label | Recommendation Statement* | Evidence Base | | |
|---------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| | against the intervention. ^{â□} | intervention, and there is at least fair evidence that the intervention improves important health outcomes. But the GDT concludes that the balance of the benefits, harms, and costs is too close to justify a general recommendation. | | |
| Evidence-Based: D | The GDT recommends against the intervention. | The GDT found at least fair evidence that the intervention is ineffective, or that harms or costs outweigh benefits. | | |
| Evidence-Based: I | The GDT makes no recommendation for or against the intervention.â□ | Evidence that the intervention is effective is lacking, of poor quality, or conflicting and the balance of benefits, harms, and costs cannot be determined. | | |
| Consensus-Based Recommendations | | | | |
| Consensus-Based | The GDT recommends the intervention. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |
| Consensus-Based | The GDT has determined that the intervention is an option. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |
| Consensus-Based | The GDT recommends against the intervention. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |

Note that most consensus-based recommendations will have evidence grade "Insufficient." For the rare consensus-based recommendations which have "Good" or "Fair" evidence, the evidence must support a different recommendation, because if the evidence were good or fair, the recommendation would usually be evidence-based. In this kind of consensus-based recommendation the evidence label should point this out, e.g., "Good, supporting a different recommendation."

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

^{*}All statements specify the population for which the recommendation is intended. $\hat{a} \square$ At the discretion of the GDT, the recommendation may use the language, "option," but must list all the equivalent options.

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The National Guideline Directors' Guideline Quality Committee reviewed and approved the guidelines in May 2008.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendations are identified as either "evidence-based (A-D, I)" or "consensus-based." For definitions of the levels of recommendations see the end of the "Major Recommendations" field.

Depression in Coronary Artery Disease (CAD)

Mental Health Outcomes

1.A. The Guideline Development Committee (GDT) recommends that the treatment of depression in CAD patients should be based on the patients' mental health condition(s), for the purpose of improving mental health outcomes. **Consensus-based**

Cardiovascular Outcomes

- **1.B.** The GDT recommends against treating depression in patients who are post myocardial infarction (MI) with cognitive behavioral therapy in order to improve cardiovascular outcomes. **Evidence-based: D**
- **1.C.** he GDT makes no recommendation for or against treating depression in patients with CAD, who are not post MI, with cognitive behavioral therapy in order to improve cardiovascular outcomes. **Evidence-based: I**
- **1.D.** The GDT makes no recommendation for or against treating depression in patients with CAD with antidepressant medications in order to improve cardiovascular outcomes. **Evidence-based: I**

Screening for CAD

2. Exercise stress testing, computed tomography (CT) angiography, and coronary artery calcium scoring are not recommended for screening asymptomatic individuals for CAD. **Consensus-based**

Angiotensin-Converting Enzyme Inhibitor (ACEI) and Angiotensin-Receptor Blocker (ARB) Therapy

ACEI Therapy

3. For patients with CAD, with or without left ventricular systolic dysfunction (LVSD), angiotensin-converting enzyme (ACE) inhibitor therapy is recommended for long term use,* unless contraindicated. **Evidence-based: B**

*For patients on concomitant aspirin, low-dose aspirin (81 mg) is recommended to preserve ACE inhibitor benefit.

ARB Therapy

- **4.A.** Angiotensin II Receptor Blocker (ARB) therapy is recommended for the following patients with CAD who are intolerant to ACE Inhibitors:
- Patients with CAD and diabetes with hypertension and microalbuminuria (or albuminuria)
- Patients with CAD and LVSD

Consensus-based

- **4.B.** For patients with CAD and hypertension (without LVSD, microalbuminuria, or diabetes) who are intolerant to ACE Inhibitors, ARB therapy is an option equal to other antihypertensive medications. **Evidence-based**
- **4.C.** For all other patients with CAD who are intolerant to ACE Inhibitors, there is insufficient evidence to recommend for or against ARB therapy. **Evidence-based**

Oral Anticoagulant Therapy

Aspirin Versus Oral Anticoagulant Therapy

5. In CAD patients who are not at increased embolic risk and who tolerate aspirin, aspirin is recommended in preference to both oral anticoagulant therapy and the combination of aspirin and oral anticoagulant therapy. **Evidence-based**

Aspirin plus Oral Anticoagulant Therapy

6. Unless contraindicated, aspirin is recommended for patients with established CAD receiving warfarin for thromboembolic prophylaxis.

Note: Use of warfarin in conjunction with aspirin and/or clopidogrel is associated with increased risk of bleeding. *Consensus-based*

CAD Post Myocardial Infarction (MI)

- **7.A.** Warfarin is recommended for post-MI patients with left ventricular thrombus, unless otherwise indicated. *Consensus-based*
- **7.B.** Long term warfarin therapy may be used in consultation with cardiology for post-MI patients with large transmural anterior infarctions. *Consensus-based*

Antiplatelet Therapy

Aspirin

- **8.A.** For all patients with CAD, daily aspirin is recommended indefinitely, unless there is clear contraindication such as active bleeding, major coagulopathy, or true aspirin allergy. **Evidence-based: B**
- **8.B.** For CAD patients on concomitant ACE Inhibitors, low-dose aspirin (81 mg) is recommended. *Consensus-based*
- **8.C.** For the initial six months following coronary artery stent placement, aspirin (81 to 325 mg) is recommended. Following this period, aspirin (81 to 162 mg) is recommended. *Consensus-based*
- **8.D.** For all other patients with CAD in whom aspirin therapy is being initiated, daily aspirin (81 to 162 mg) is recommended. *Consensus-based*

Clopidogrel Use in Stable Patients

- **9.A.** In stable CAD patients who tolerate aspirin well (and who are not post-procedure), clopidogrel is not recommended as either a substitute for or in addition to aspirin. *Consensus-based*
- **9.B.** In stable CAD patients with contraindications to aspirin, clopidogrel is recommended. *Consensus-based*

Antiplatelet Therapy Post Stent Placement

All patients with CAD should take aspirin therapy indefinitely regardless of stenting status. In addition, the CAD GDT makes the following recommendations:

- **10.A.** Following coronary artery bare metal stent placement clopidogrel plus aspirin is recommended to be given for at least four weeks. *Evidence-based*
- **10.B.** It is recommended that all patients receiving drug-eluting stents (DES) be prescribed uninterrupted dual treatment with clopidogrel and aspirin for at least 12 months. *Consensus-based*
- **10.C.** It is strongly recommended that any elective procedures which would require stopping or interrupting this therapy (dental work, colonoscopy, or other surgical procedures) should be delayed until after one year (12 consecutive months) of clopidogrel is completed. **Consensus-based**
- **10.D.** Healthcare providers who perform invasive or surgical procedures and are concerned about peri-procedural and post-procedural bleeding must be made aware of the potentially catastrophic risk of premature discontinuation of clopidogrel in the first year following coronary DES placement. **Consensus-based**
- **10.E.** It is strongly recommended that patients taking clopidogrel consult with their treating cardiologist before stopping this medication, even if instructed to do so by another healthcare provider. **Consensus-based**
- **10.F.** For patients who receive a drug-eluting stent and who must have procedures that mandate stopping clopidogrel therapy, it is recommended that

aspirin should be continued if at all possible, and the clopidogrel restarted as soon as possible after the procedure. **Consensus-based**

10.G. If there is presence of a rash after clopidogrel use, patients may be switched to ticlopidine. *Consensus-based*

Beta-Blocker Therapy in the Secondary Prevention of CAD

Beta-Blocker Therapy

- **11.A.** For CAD patients, non-intrinsic sympathomimetic activity (non-ISA) beta-blocker therapy is recommended, unless contraindicated. *Consensus-based*
- **11.B.** For patients with two or more of the following risk factors for CAD (age \geq 65 years, hypertension, current smoking, serum cholesterol \geq 240 mg/dL (6.2 mmol/L), or diabetes mellitus), beta-blocker therapy is recommended perioperatively for vascular surgery. **Consensus-based**

Note: Drugs <u>without</u> ISA are atenolol, betaxolol, bisoprolol, carvedilol, labetalol, nadolol, metoprolol, propranolol, and timolol. Drugs <u>with</u> ISA are acebutolol and pindolol.

CAD plus Mild to Moderate Reversible Airway Disease or COPD

- **12.A.** For CAD patients with concomitant mild to moderate reversible airway disease or chronic obstructive pulmonary disease (COPD) cardioselective beta-blockers are recommended. *Evidence-based*
- **12.B.** Discuss the risks and benefits of treatment with the patient and instruct the patient to report any increase in airway symptoms. *Consensus-based*
- **12.C.** Initiating beta-blocker therapy is NOT recommended:
- For patients with severe airway disease requiring frequent hospitalization or intubation
- During acute exacerbation of airway disease
- When airway disease is unstable or poorly controlled

Consensus-based

CAD plus Heart Failure

- **13.A.** For CAD patients with either left ventricular systolic dysfunction (LVSD) (NYHA Class II-IV) or asymptomatic LVSD (New York Heart Association [NYHA] Class I), beta-blockers are strongly recommended. *Evidence-based*
- **13.B.** For CAD patients with left ventricular systolic dysfunction, carvedilol, metoprolol succinate, or bisoprolol is the recommended choice of beta-blocker therapy. *Evidence-based*

Calcium Channel Blocker Therapy

CAD with Normal Ventricular Systolic Function

- **14.A.** Calcium channel blockers (CCBs) are NOT recommended to reduce morbidity or mortality from CAD. *Evidence-based*
- **14.B.** In CAD patients with normal ventricular systolic function, calcium channel blockers (CCBs) may be used for the treatment of angina pectoris or hypertension when beta-blockers and ACE inhibitors are ineffective or contraindicated. **Consensus-based**
- **14.C.** In patients with CAD, immediate release formulations of nifedipine are NOT recommended due to the increased risk of cardiovascular mortality. **Evidence-based**

CAD with LVSD

- **15.A.** Amlodipine* and felodipine* (second generation dihydropyridine calcium channel blockers) are options for the treatment of angina pectoris or hypertension in patients with LVSD. *Evidence-based*
- **15.B.** The GDT recommends against the use of calcium channel blockers (CCBs) other than amlodipine* and felodipine* in patients with LVSD. **Evidence-based**

Lifestyle Modification

Diet Therapy

16. For all patients with CAD, a diet rich in fruits, vegetables, legumes, nuts, whole grains, and n-3 (omega-3) polyunsaturated fatty acids is recommended. *Evidence-based*

Dietary Fat Modification

- **17.** For all patients with CAD consuming a usual Western diet, the following modifications in dietary fat are recommended:
- Increase intake of n-3 (omega-3) polyunsaturated fatty acids to a level of ~ 1 g/day from a variety of sources (flaxseed, canola, and soybean oils, nuts, fish, and fish oil supplements).
- Replace saturated fatty acids with polyunsaturated and monounsaturated fatty acids.
- Reduce or eliminate intake of trans-fatty acids.

Consensus-based

Dietary Supplement Therapy

^{*}Not Federal Drug Administration (FDA) approved for heart failure.

- **18.A.** For patients with CAD, supplemental vitamins C, E, and beta carotene are not recommended for prevention of cardiovascular mortality or subsequent coronary events. *Evidence-based: D*
- **18.B.** For patients with CAD, supplemental folic acid, vitamin B6, and vitamin B12 are not recommended. *Evidence-based: D*

Smoking Cessation

19. For all patients with CAD who smoke, complete smoking cessation is strongly recommended. **Evidence-based: A**

Exercise

- **20.A.** For all patients with CAD, 30 to 60 minutes of exercise (walking, jogging, cycling, or other aerobic activity) at least three to four times weekly is recommended. **Evidence-based: B**
- **20.B.** Either supervised or non-supervised exercise is recommended. *Consensus-based*

Hormone Therapy

- **21.A.** For postmenopausal women with CAD, unopposed estrogen therapy and estrogen and progestin combination therapy are not recommended for the prevention of cardiovascular events. Women taking these therapies solely to prevent cardiovascular events are strongly recommended to discontinue these therapies. **Evidence-based**
- **21.B.** Women currently taking hormone therapy solely for the prevention of cardiovascular events are advised to discontinue use either all at once or by tapering the dose. *Consensus-based*

Comorbid Conditions

Hypertension: Target Blood Pressure

- **22.A.** The optimal goal blood pressure for patients with CAD or CAD risk equivalents (abdominal aortic aneurysm [AAA], peripheral arterial disease, or carotid arterial disease) is < 130/80 mm Hg. **Consensus-based**
- **22.B.** The optimal goal blood pressure for patients with CAD and diabetes or renal disease is < 130/80 mm Hg. *Consensus-based*

Lipid Management

(Excerpted from the Kaiser Permanente National Dyslipidemia Guidelines)

23. Statin Treatment

- Reducing low-density lipoprotein cholesterol (LDL-C) is the primary focus of treatment.
- Because of its proven effectiveness in event reduction, safety and cost, simvastatin is the preferred first-line statin.
- Initiate statins at a dose sufficient to reduce LDL-C to <100 mg/dL and by at least 30% to 40%. Treatment is recommended even if baseline LDL-C is <100 mg/dL. If baseline LDL-C is <160 mg/dL, initiate simvastatin at 40 mg. If baseline LDL-C is >160 mg/dL, initiate simvastatin at 80 mg.
- In people with established CAD, an LDL-C goal of <70 mg/dL is optional.
- When the LDL-C goal is achieved, reassess LDL-C annually to ensure that the
 patient remains at goal; it is optional to repeat the lipid panel in three to six
 months.

Given that the Dyslipidemia GDT recommends statin therapy for all patients with CAD, the CAD GDT believes there is no role for a trial of lifestyle intervention alone prior to the initiation of statin therapy in patients with CAD. **Consensus-based**

Definitions:

Label and Language of Recommendations

| Recommendation Label | Recommendation Statement* | Evidence Base | | |
|--------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Evidence-Based Recommendations | | | | |
| Evidence-Based: A | The Guideline Development Team (GDT) strongly recommends the intervention. | The intervention improves important health outcomes, based on good evidence, and the GDT concludes that benefits substantially outweigh harms and costs. | | |
| Evidence-Based: B | The GDT recommends the intervention. | The intervention improves important health outcomes, based on 1) good evidence that benefits outweigh harms and costs; or 2) fair evidence that benefits substantially outweigh harms and costs. | | |
| Evidence-Based: C | The GDT makes no recommendation for or against the intervention. ^{â□} | Evidence is sufficient to determine the benefits, harms, and costs of an intervention, and there is at least fair evidence that the intervention improves important health outcomes. But the GDT concludes that the balance of the benefits, harms, and costs is too close to justify a general recommendation. | | |
| Evidence-Based: D | The GDT recommends against the intervention. | The GDT found at least fair evidence that the intervention is ineffective, or that harms or costs outweigh benefits. | | |

| Recommendation Label | Recommendation Statement* | Evidence Base | | |
|---------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Evidence-Based: I | The GDT makes no recommendation for or against the intervention. â□ | Evidence that the intervention is effective is lacking, of poor quality, or conflicting and the balance of benefits, harms, and costs cannot be determined. | | |
| Consensus-Based Recommendations | | | | |
| Consensus-Based | The GDT recommends the intervention. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |
| Consensus-Based | The GDT has determined that the intervention is an option. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |
| Consensus-Based | The GDT recommends against the intervention. | The recommendation is based on the consensus of the GDT, typically in the setting of insufficient evidence. | | |

Note that most consensus-based recommendations will have evidence grade "Insufficient." For the rare consensus-based recommendations which have "Good" or "Fair" evidence, the evidence must support a different recommendation, because if the evidence were good or fair, the recommendation would usually be evidence-based. In this kind of consensus-based recommendation the evidence label should point this out, e.g., "Good, supporting a different recommendation."

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate treatment and management of adult patients with coronary artery disease to decrease morbidity and mortality and improve patient outcomes

^{*}All statements specify the population for which the recommendation is intended. $\hat{a} \square$ At the discretion of the GDT, the recommendation may use the language, "option," but must list all the equivalent options.

POTENTIAL HARMS

- Side effects of pharmacological agents
- Refer to the "Problem Formulation" sections of the original guideline document for specific side effects of recommended interventions

CONTRAINDICATIONS

CONTRAINDICATIONS

Aspirin therapy is contraindicated in patients with active bleeding, major coagulopathy, or aspirin allergy.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines are informational only. They are not intended or designed as
 a substitute for the reasonable exercise of independent clinical judgment by
 practitioners, considering each patient's needs on an individual basis.
- Guideline recommendations apply to populations of patients. Clinical judgment is necessary to design treatment plans for individual patients.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Pocket Guide/Reference Cards

For information about <u>availability</u>, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Kaiser Permanente Care Management Institute. Coronary artery disease (CAD) clinical practice guidelines. Oakland (CA): Kaiser Permanente Care Management Institute; 2008 May. 194 p. [137 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Mar (updated May 2008)

GUIDELINE DEVELOPER(S)

Kaiser Permanente Care Management Institute - Managed Care Organization

SOURCE(S) OF FUNDING

Kaiser Permanente Care Management Institute

GUIDELINE COMMITTEE

Kaiser Permanente Disease/Topic Guidelines Project Management Team

KP Coronary Artery Disease Guidelines Development Team

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Kaiser Permanente Disease/Topic Guidelines Project Management Team: John Golden, MD, Clinical Lead Care Management Institute; Mary Choi, MPH, Project Manager Care Management Institute; Arlene Mann, RN, Analyst Hayes, Inc.; Paul Barrett, MD, EBM, Methodologist Care Management Institute; Tabitha Pousson, Administrative Assistant Care Management Institute

KP Coronary Artery Disease Guidelines Development Team: Colorado: John Merenich, MD - Endocrinology, Jennifer B. Jeans, MD - Internal Medicine; Georgia: George Kawamura, MD - Internal Medicine; Hawaii: Stephen K Chan, MD - Cardiology; Mid-Atlantic States: John Golden, MD - Cardiology; Northern California: Gerald Bourne, MD - Cardiology, Marc Jaffe, MD - Endocrinology and Internal Medicine, Eleanor Levin, MD - Cardiology, Carlos Iribarren, MD - Division of Research, CVD Research, Joyce Arango, DrPH - Northern California Guidelines Director; Northwest: Robin M. Lake, MD - Cardiology, Neil Blair, MD - Internal Medicine; Ohio; Maan Fares, MD - Cardiology, Southern California: Victor M Benson, MD - Internal Medicine, Kathleen S Ryman, MD - Cardiology, Joel L Whittaker, MPH - Consultant; California Regions: Gary M Besinque, PharmD - Pharmacy

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

There were no conflicts of interests for any member of the Guideline Development Team (GDT).

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Kaiser Permanente Care Management Institute. Secondary prevention of coronary artery disease clinical practice guideline. Oakland (CA): Kaiser Permanente Care Management Institute; 2006 Mar. 117 p. [51 references]

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available from the Kaiser Permanente Care Management Institute, One Kaiser Plaza, 16th Floor, Oakland, CA 94612.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

 Pocket card: coronary artery disease in primary care. Oakland (CA): Kaiser Permanente Care Management Institute; 2006. 2 p.

Electronic copies: None available

Print copies: Contact the CMI Product Line at (510) 271-6426 or CMIProducts@kp.org.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on November 17, 2006. The information was verified by the guideline developer on December 19, 2006. This summary was updated by ECRI Institute on January 10, 2010 following the U.S. Food and Drug Administration advisory on Plavix (Clopidogrel). This summary was updated by ECRI Institute on February 15, 2010.

COPYRIGHT STATEMENT

For any questions regarding the content of Kaiser Permanente National Clinical Practice Guidelines, please contact Denise Myers, RN MPH, Manager, CMI at gladys.i.tom@kp.org or (510) 271-2620.

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse[™] (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Copyright/Permission Requests

Date Modified: 4/19/2010

